

WE CLAIM:

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1. A filter construction for a disk drive enclosure, the filter construction comprising:
 - (a) a housing;
 - (b) a first filter portion in the housing, the first filter portion configured and arranged for positioning in an incoming air stream to provide a path for flow of air into the disk drive enclosure, the incoming air stream entering the disk drive enclosure through a port; and
 - (c) a second filter portion in the housing, the second filter portion configured and arranged for positioning in an air current to provide a path for flow of air within the disk drive enclosure.
 2. The filter construction according to claim 1, wherein the first filter portion comprises:
 - (a) a particulate filter; and
 - (b) an adsorbent filter;
 3. The filter construction according to claim 2, wherein the first filter portion comprises a diffusion channel.
 4. The filter construction according to claim 3, wherein the diffusion channel comprises a plastic piece defining a channel.
 5. The filter construction according to claim 4, wherein the channel is positioned against a surface of the disk drive enclosure.
 6. The filter construction according to claim 4, wherein at least a portion of the diffusion channel is defined by the housing.

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7. The filter construction according to claim 2, wherein the adsorbent filter comprises an adsorbent material selected from the group consisting of activated carbon, impregnated carbon, activated alumina, molecular sieves, silica gel, silica, and combinations thereof.

8. The filter construction according to claim 1, wherein the second filter portion comprises:

(a) an adsorbent filter having a low pressure drop across the adsorbent filter.

9. The filter construction according to claim 8, wherein the adsorbent filter comprises an adsorbent material selected from the group consisting of activated carbon, impregnated carbon, activated alumina, molecular sieves, silica gel, silica, and combinations thereof.

10. The filter construction according to claim 8, wherein the second filter portion comprises a recirculation filter.

11. A disk drive assembly comprising:

(a) an enclosure;

(b) a disk rotatably mounted within the enclosure; and

(c) a filter construction positioned within the enclosure, the filter construction comprising:

(i) a housing positioned in an air current, the air current moving within the disk drive enclosure;

(ii) a first filter portion in the housing; and

(iii) a second filter portion in the housing.

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12. The disk drive assembly according to claim 11, wherein the first filter portion is positioned in an incoming air stream, the incoming air stream entering the enclosure through a port.

13. The disk drive assembly according to claim 11, wherein the filter construction is positioned beside the disk.

14. A method of removing contaminants from a disk drive assembly, the method comprising:

- (a) positioning a filter construction at least partially within a disk drive assembly, the filter construction comprising:
 - (i) a first filter portion, and
 - (ii) a second filter portion;
- (b) filtering an incoming air stream with the first filter portion, the incoming air stream entering the disk drive assembly through a port; and
- (c) filtering an internal air current with the second filter portion, the internal air current moving within the disk drive assembly.

15. The method according to claim 14, wherein the step of positioning a filter construction at least partially within a disk drive assembly comprises:

- (a) positioning a filter construction comprising a first filter portion comprising:
 - (i) a particulate filter; and
 - (ii) an adsorbent filter.

16. The method according to claim 14, wherein the step of positioning a filter construction at least partially within a disk drive assembly comprises:

- (a) positioning a filter construction comprising a first filter portion comprising a diffusion channel.

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